

- 2 -

Parce et al.
Appl. No. 09/721,508

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments

In the Specification:

Please substitute the following paragraphs for the pending paragraphs.

Please substitute the following paragraph for the paragraph beginning on page 28, line 28:

el

In operation, test compounds in discrete subject material regions, are serially introduced into the device, separated as described above, and flowed along the transverse sample injection channel 304 until the separate subject material regions are adjacent the intersection of the sample channel 304 with the parallel reaction channels 310-324. As shown in FIGS. 4A-4F, the test compounds are optionally provided immobilized on individual beads. In those cases where the test compounds are immobilized on beads, the parallel channels are optionally fabricated to include bead resting wells 326-338 at the intersection of the reaction channels with the sample injection channel 304. Arrows 340 in Figure 4A indicate the net fluid flow during this type of sample/bead injection. As

- 3 -

Parce *et al.*
Appl. No. 09/721,508

E2
and

individual beads settle into a resting well, fluid flow through that particular channel will be generally restricted. The next bead in the series following the unrestricted fluid flow, then flows to the next available resting well to settle in place.

Please substitute the following paragraph for the paragraph beginning on page 29, line 18:

E2

Within the parallel channel, the test compound will be contacted with the biochemical system for which an effector compound is being sought. As shown, the first component of the biochemical system is placed into the reaction channels using a similar technique to that described for the test compounds. In particular, the biochemical system is typically introduced via one or more transverse seeding channels 306. Arrows 342 in Figure 4A illustrate the direction of fluid flow within the seeding channel 306. The biochemical system is optionally solution based, e.g., a continuously flowing enzyme/substrate or receptor-ligand mixture, like that described above, or as shown in FIGS. 4A-4F, may be a whole cell or bead based system, e.g., beads which have enzyme/substrate systems immobilized thereon.